



Agenda Item: 2.2

Person Responsible: Mike Sparrow

**EXCOM/COs Meeting 2011**

**Edinburgh, 16,18,19<sup>th</sup> July 2011**

**SCAR 4<sup>th</sup> Cross Linkages Meeting**

**5 - 6 May 2011**

**Ottawa Canada**

# Executive Summary

**Title:** SCAR 4<sup>th</sup> Cross Linkages Meeting

**Authors:** M Sparrow

**Introduction/ Background:** This is the 4<sup>th</sup> Cross linkages meeting. A major focus was the next generation of SRPs.

**Important Issues or Factors:** Aims were (i) to discuss current activities, in particular the new PPGs from a cross cutting perspective (ii) to concentrate on new ideas that cross cut programmes and disciplines (iii) to identify emerging issues and new frontiers on the horizon that are interdisciplinary.

**Recommendations/Actions and Justification:** Various (see Appendix 2)

**Expected Benefits/Outcomes:** Increased efficiency and a more strategic approach to interdisciplinary interactions, in particular with the next generation of SRPs.

**Partners:** All SCAR groups plus IASC, IACS, WCRP, IGBP, COMNAP etc.

**Budget Implications:** Funds for meeting every 2 years or so (~\$12,000)



## SCAR 4<sup>th</sup> Cross Linkages Meeting



5 - 6 May 2011

Ottawa Canada

**Meeting Location:** Board Room of the Canadian Museum of Nature, Ottawa, Canada  
(<http://nature.ca/en/home>)

### Attendees:

Mike Sparrow	SCAR Executive Director
Chuck Kennicutt	SCAR President
Alessandro Capra	SSG Geosciences + SERCE
Kathleen Conlan	SSG Life Sciences + AntEco + AntETR
Takashi Yamanouchi	SSG Physical Sciences
John Storey	SRP AAA
Robert DeConto (via Skype)	SRP ACE
Guido di Prisco	SRP EBA
Pete Convey	SRP EBA +OSC 2012
John Turner	SRP AGCS + PACE,
Bruno Danis	SCADM+ SCAR MarBIN

### *1. Introduction, Welcome and Aims*

The meeting opened with the Director of the Canadian Museum of Nature, M Houle, and K Conlan, the Chief Office of Life Sciences welcoming the participants to the museum and the city of Ottawa. The SCAR President, M C Kennicutt, and Executive Director, M Sparrow, set out the background to the meeting, noting that the meeting aims were (i) to discuss current activities, in particular the new PPGs from a cross cutting perspective (ii) to concentrate on new ideas that cross cut programmes and disciplines (iii) to identify emerging issues and new frontiers on the horizon that are interdisciplinary.

### *2. Progress on Actions from Modena meeting*

M Sparrow summarised progress made on the Actions from the Modena meeting in 2009 (see Appendix 1), noting that almost all the Actions had been completed. New Actions from this meeting are summarised in Appendix 2.

### *3. Update on current and future SSG cross cutting activities*

M Sparrow listed all the cross cutting Standing Scientific Group (SSG) activities as a focus for discussion, noting that Advancing TecHnological and ENvironmental stewardship for subglacial exploration in Antarctica (ATHENA) (joint between the Life Sciences (LS), Physical Sciences (PS), and Geosciences (GS) SSGs) and the Southern Ocean Acidification Action Group (LS, PS) were newly approved at the Delegates' meeting in Buenos Aires (2010).

It was noted that there had been some discussion as to whether the International Partnerships in Ice Core Sciences (IPICS) should be jointly sponsored by GS and PS (currently it is under PS) since there are strong linkages to e.g. the Antarctic Climate Evolution (ACE) Scientific Research Programme (SRP). It was agreed that a higher priority was to ensure that linkages were improved between SCAR as a whole and IPICS. If necessary co-sponsorship of IPICS by GS as well as PS could be discussed at a later date depending on how future interactions with IPICS proceed.

**ACTION: (i) Explore how to improve linkages between SCAR and IPICS, via ACE and other relevant SCAR programmes; (ii) if deemed appropriate discuss co-sponsorship of IPICS by SSG-GS. (R deConto, A Capra, T Yamanouchi; (i) ASAP; (ii) by SCAR Business Meetings 2012)**

A Capra, Chief Officer (CO) of SSG-GS, reported that the Action Group on GPS for Weather and Space Weather Forecasting (GWSWF) intended to upgrade to an Expert Group, with revised Terms of Reference (ToRs). M C Kennicutt noted that the new ToRs overlapped with those of the Inter-hemispheric Conjugacy Effects in Solar-Terrestrial and Aeronomy Research (ICESTAR) Expert Group and that the two groups should discuss the best way forward.

**ACTION: A Capra to discuss with SSG-PS and chairs of ICESTAR EG the way forward with regards to the new ToRs of the GWSWF, e.g. should they be merged into a single Expert Group? (A Capra; by EXCOM 2011)**

In order to improve the interactions between the Standing Committee on the Antarctic Treaty System (SC-ATS) and the SSGs there should be an SSG representative from each of LS, GS and PS on SC-ATS. There is a need to confirm the PS and LS representatives.

**ACTION: SSG-LS and PS representatives to SC-ATS to be finalised (K Conlan, T Yamanouchi, M Sparrow; by EXCOM 2011)**

M Kennicutt reminded the SSGs that they will need to provide advice to the Delegates on the Programme Planning Group (PPG) proposals for the next generation of SRPs. External reviews will be provided but the proposal will not be revised – they therefore may want to develop a response to external reviews during SSG business meetings.

#### ***4. SRPs: Update on current and future SRP cross cutting activities***

Rob DeConto (ACE), John Turner (Antarctic and the Global Climate System, AGCS), John Storey (Astronomy and Astrophysics from Antarctica, AAA) and Guido di Prisco (Evolution and Biodiversity in Antarctica, EBA) were given the opportunity to highlight any particular cross cutting activities.

Several important areas of interaction were summarised, including for example the need to improve interactions between ACE and AGCS (links between different time scales of climate variability) and between EBA and the Treaty relevant organisations such as the Committee for Environmental Protection (CEP) and the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR). Many of these interactions will be pursued as planning for the new round of SRPs continue (see Section 5).

Commenting on an update provided by R de Conto on the Integrated Ocean Drilling Program (IODP), M Sparrow suggested it would be useful to ensure linkages between the IODP science plan and the Southern Ocean Observing System (SOOS) were highlighted.

**ACTION: Ensure linkages between IODP and SOOS (R de Conto, M Sparrow; ASAP)**

#### ***5. The New PPGs. Short presentation on each focussing on areas of cross discipline perspective***

Presentations were given on the new Programme Planning Groups (PPGs), focussing on cross-cutting activities.

**(i) AntEco and AntETR**

K Conlan presented progress with the two biology-focussed PPGs, State of the Antarctic Ecosystem (AntEco) and Antarctic Ecosystem: Adaptation, Thresholds and Resilience (AntETR). AntEco will focus on patterns of Antarctic biodiversity to further the knowledge on past processes that formed the current biodiversity and patterns therein, and use this to develop scenarios of its future state through interdisciplinary approaches. AntETR will determine the resistance, resilience and vulnerability to change of Antarctic biological systems. In particular, it will focus on the likelihood of cataclysmic shifts or “tipping points” in Antarctic ecosystems. A call for contributions from Antarctic scientists was sent out in the fall of 2010 and the membership has been established. Development of the programmes will be overseen by Don Cowan (S. Africa) and Julian Gutt (Germany) respectively. The CO, SSG-LS and co-leaders of EBA will act as overseers. Workshops to develop the PPG proposals are planned for September/October 2011.

**(ii) PACE**

J Turner presented progress with the PPG Past and Future Change of the Antarctic Environment (PACE). PACE will be concerned with delivering greater insight into the natural variability of the Antarctic climate system, understanding of the responses of the system to natural and anthropogenic forcing factors and improved regional predictions of key elements of the atmosphere, ocean and cryosphere. Detailed planning of PACE will be carried out at a workshop to be held in Melbourne, Australia in July 2011.

**(iii) SERCE**

A Capra presented progress with the PPG Solid Earth response and Cryosphere Evolution (SERCE). The goal of the SERCE programme is to improve the understanding of the interaction between the solid earth, cryosphere and climate as a contribution to sea level change.

SERCE will require the study of processes (geodynamics, tectonics, ice mass change) and of geophysical models. There will be a need to identify and develop key disciplinary and interdisciplinary components of a science programme aimed at advancing understanding of the interactions between the solid earth and the cryosphere. This includes glacial isostatic adjustment (GIA) and ice mass change and the influence of solid earth parameters (heat flow, disposition of sediments) on ice sheet dynamics.

Observations will be the input for physical and geophysical modellers who will work on models in order to furnish an improved sea level change model between the integration of observations in Antarctica and global observation and /or models. A planning meeting will be held in conjunction with the ISAES meeting, July 2011.

**(iv) Other possible PPGs**

R de Conto noted that the ACE community were discussing a possible post-ACE PPG at the International Symposium on Antarctic Earth Sciences (ISAES) meeting in Edinburgh (July 2011). He noted that any post-ACE programme would need to have strong linkages to the PPG PACE and better connections to the ice core community

G di Prisco proposed the idea of a cross PPG meeting early in 2012 to produce a cohesive proposal for all PPGs. At this stage the PPGs should already be more or less fully developed. The meeting will be to fine tune proposals and ensure common strategies. The number of participants should be limited (ca. 15) and include representative coordinators of each PPG. Modena was suggested as a possible location for the meeting by A Capra.

**ACTIONS: Synergies between PPGs: (i) CO of SSG-GS to be involved in post ACE meeting at ISAES to ensure synergies with SERCE; (ii) explore involvement on ISMASS in post ACE PPG and SERCE; (iii) invite ACE representative to PACE meeting in Australia (IUGG); (iv) call a “PPG synergies” meeting Jan/Feb 2012 to develop a strategic portfolio of potential SRPs, fully explore linkages between**

the PPG proposals and ensure cross-fertilization and exchange of critical information and knowledge. (A Capra, K Conlan, T Yamanouchi, R deConato, J Turner; additional names for (iv); ASAP)

**ACTION: Ensure PPG leaders are aware of final submission dates for PPG proposals and full requirements. (M Sparrow; ASAP)**

## 6. *SCAR and Climate*

J Turner led the discussion on SCAR and climate, in particular on the role of the new ACCE Expert Group (see Appendix 3). He noted that an ACCE II may not have the impact of the first release and suggested that it might be better to have more targeted publications on specific topics e.g.

- Southern Ocean change
- Ice sheet mass balance
- Recovery of the ozone hole
- The Antarctic climate in 2100

The participants felt this targeted approach would be higher impact and a better use of limited resources.

**ACTION: Develop a 5 to 10 year schedule of “status” articles. Target questions that will be asked or should be asked. Multi- purpose for ATCM, public and scientists – may need multiple versions targeting differing audiences – press releases to establish SCAR as an authoritative source of Antarctic science knowledge. (J Turner/ACCE Expert Group; ASAP)**

J Turner suggested a linkage between the ACCE Group and SCADM in providing access to key climate data e.g. the predictions from IPCC AR5.

**ACTION: The ACCE Expert Group and SCADM to work together in order to provide access to key climate data e.g. the predictions from IPCC AR5**

The point was raised that it would be good to have more on the SCAR website to inform the general public and others. M Sparrow pointed out that this would be a key idea behind updating the SCAR website. Another suggestion made is that when SCAR does update its website it would be useful to have a sub-section on the ACCE webpage dealing with the latest papers of relevance to climate.

## 7. *Interactions with IASC, IACS and others (e.g. WCRP/IGBP)*

Mike Sparrow summarised and led a discussion on cross cutting activities with SCAR partners (e.g. ISMASS with IASC) with a focus on bipolar connections in particular to feed into BipAG II.

One item that was raised is that it would be useful to have a future meeting joint with IASC, perhaps in 2016. This has been raised before and will be explored further.

## 8. *SCAR OSC 2012*

Pete Convey (co-chair of the 2012 SCAR Open Science Conference) briefly discussed progress with the next Open Science Conference. The initial sessions will be based around the SCAR science programmes and groups.

## 9. *Observing Systems*

M Sparrow outlined developments with the Southern Ocean Observing System i.e. that the SOOS plan is finalised and (as of May 2011) being formatted for printing. A SOOS IPO is being established in Hobart with an Executive Officer who will commence in August 2011. The SCAR/SCOR Expert Group on Oceanography will act as a Scientific Steering Committee for SOOS.

SCAR interacts with WMO Executive Council Panel on Polar Observations, Research and Services and other organisations such as WCRP with regards to observing Systems. T Yamanouchi briefly summarised progress with the concept of an International Polar Decade (IPD). The SCAR EXCOM will discuss the IPD further at its meeting in July 2011.

**ACTION: SCAR to arrange a meeting in Portland during the Business Meetings (most likely as part of the OpMet group) to discuss observing systems (the way forward, synergies etc.) within SCAR (e.g. OPMet, SOOS) and with other organisations (e.g. WMO PORs, WCRP) (S Colwell, M Sparrow; by early 2012)**

### ***10. SCAR Products and interaction with SCADM and SCAGI***

M Sparrow and B Danis summarised relevant issues with regards to the SCAR Products. In particular M Sparrow reiterated that it was important that the SCAR Products were reviewed to ensure a consistent “branding” and to make sure that those products listed were up to date and relevant to the work of SCAR.

**ACTIONS: SCAR Products: SCAR Secretariat (with SCADM/SCAGI COs) to carry out an initial review of SCAR Products (see which have been updated, make initial email contact with those in charge of Products etc.) and present results to SCADM/SCAGI. SCAGI and SCADM to then discuss the outcomes with a view to a more comprehensive review if necessary. (M Sparrow, SCADM, SCAGI COs; by end of year)**

One new SCAR Product under development is the Antarctic Data Atlas. The atlas presents various key fields concerning the past, present and possible future evolution of the Antarctic environment. It is complementary to the SCAR READER database that contains mean climate data for the Antarctic research stations. The site contains fields describing the atmosphere, ocean, cryosphere and terrestrial environment. Annual, seasonal and monthly mean data are presented.

The broad outline of the project was agreed at the SCAR Cross-SSG workshop held in Modena, Italy in February 2009. The initial test version of the database (<http://www.antarctica.ac.uk/met/jtu/KeyFields/>) has been made available for comment.

**ACTION: Data Atlas (i) SCAR to advertise the Antarctic Data Atlas (e.g. article for next SCAR Newsletter), but making clear this is a test version that is open for comment. (ii) J Turner to produce a short description of what is required in terms of input, (iii) Need an http alias for the atlas. (Executive Director, J Turner; ASAP)**

### ***11. Other cross cutting activities not covered in the above, summary of Actions etc.***

A brief discussion was held on the possibility of forming regional groups like the King George Island Action Group. Although this latter group was not as successful as had been hoped this may be more effective in other regions.

**ACTION: SCAR (with COMNAP) to investigate forming a group to coordinate research and possibly logistics in other regions of the Antarctic e.g. Ross Sea region (G di Prisco, President; by Portland (July) 2012)**

**Meeting Close.**

### Appendix 1: Progress on Actions from the Modena (3<sup>rd</sup> cross linkages) meeting

	<b>Action</b>	<b>Who</b>	<b>When</b>	<b>Progress</b>
1	<b>Follow up on unfulfilled recommendations a-k</b>	Secretariat	asap	Most done, a few no longer relevant. ED followed up on a couple still to do.
2	<b>Ensure link develops with SSG-LS on SEEPS Group</b>	Secretariat	asap	Done
3	<b>Contact Birds and Marine Mammals Group (e.g. chair) to check on progress</b>	Secretariat and SSG-LS chair	asap	Done
4	<b>Finalise the draft KGI paper, with COMNAP, for presentation to COMNAP</b>	Secretariat	asap	Done, but recommendation to EXCOM will be that KGI group be dissolved (Marenssi, per com.)
5	<b>Ask KGI operators and ATS Secretariat if they would be interested in a courtesy visit from SCAR President during his impending visit to KGI and Buenos Aires</b>	Secretariat	asap	Done
6	<b>Check what SCOR is doing in terms of wikis or blogs</b>	Secretariat	asap	Done (SCOR doesn't do them)
7	<b>Consider asking via an Antarctic science journal editorial what SCAR needs to do to improve its level of interaction</b>	Secretariat	asap	Not yet done – may need further discussion.
8	<b>Consider using funds to pay for extraction of old data out of South American data collections from the peninsula and islands</b>	AGCS and J Turner	asap	Done (via Gareth Marshall)
9	<b>Ask all national committees if any is prepared to host the SC-AGI web site</b>	Secretariat	asap	Done – China agreed, but has been difficult to make progress

10	<b>Failing finding a national agency to operate the SC-AGI web site, consider if it can be managed by the Secretariat</b>	Secretariat	asap	Waiting on China – temporary web page (SCADM and SCAGI) used.
11	<b>Find an operator to manage the KGI GIS on KGI for the benefit of all KGI operators</b>	Secretariat	asap	Again, waiting on China.
12	<b>Liase with Google regarding their request to use the SCAR Composite Gazetteer and report back to the Executive on any issues arising</b>	H Brolsma	asap	Done.
13	<b>Try to get a brief report on progress with and plans for PAntOS from Scott Palo – before EXCOM</b>	M Candidi	asap	PAntOS dissolved. Under consideration if another umbrella group is needed.
14	<b>Check with SSG-LS and SOOS communities to see what position SCAR needs to take, if any, on ocean acidification, and in what time frame – e.g. possibly a paper for consideration at XXXI SCAR</b>	Secretariat	asap	Done – SCAR has an Ocean Acidification Group.
15	<b>Work on the development of a data atlas page for the SCAR web site, aiming to have it substantially populated before XXXI SCAR</b>	Secretariat, J Turner and K Finney	asap	Draft atlas available from:  <a href="http://www.antarctica.ac.uk/met/jtu/KeyFields/">http://www.antarctica.ac.uk/met/jtu/KeyFields/</a>
16	<b>Change all SCAR's database titles to include the word Antarctic in their titles, to enable easy recognition on Google searches</b>	Secretariat and service providers	asap	Will be done as part of review of SCAR Products.
17	<b>Consider the need for joint production and consideration of papers</b>	SSG-LS and SSG-PS	2010 SCAR meeting	Ocean Acidification paper was prepared. PoPs paper prepared for Treaty in 2010.

	<b>on POPs and on ocean acidification for the 2010 SCAR meeting</b>			
18	<b>Remind all participants of EXCOM and Chief Officers' August meetings in Punta Arenas of the meeting schedule</b>	Secretariat	asap	Done

**Appendix 2: Actions arising from Ottawa (4th cross linkages) meeting**

No.	Action	Whom	By When	Progress
1	<i>IPICS</i> : (i) Explore how to improve linkages between SCAR and IPICS, via ACE and other relevant SCAR programmes; (ii) if deemed appropriate discuss co-sponsorship of IPICS by SSG-GS	R deConto, A Capra, T Yamanouchi	(i) ASAP (ii) By SCAR Business Meetings 2012	
2	A Capra to discuss with SSG-PS and chairs of ICESTAR EG the way forward with regards to the new ToRs of the GWSWF, e.g. should they be merged into a single EG?	A Capra	EXCOM 2011	
3	SSG-LS and PS representatives to SC-ATS to be finalised	K Conlan, T Yamanouchi, Executive Director	ASAP	
4	Ensure linkages between IODP and SOOS	R deConto	ASAP	
5	<i>Synergies between PPGs</i> : (i) CO of SSG-GS to be involved in post ACE meeting at ISAES to ensure synergies with SERCE; (ii) explore involvement on ISMASS in post ACE PPG and SERCE; (iii) invite ACE representative to PACE meeting in Australia (IUGG); (iv) call a “PPG synergies” meeting Jan/Feb 2012 to develop a strategic portfolio of potential SRPs, fully explore linkages between the PPG proposals and ensure cross-fertilization and exchange of critical information and knowledge.	A Capra, K Conlan, T Yamanouchi, R deConto, J Turner	ASAP	
6	Ensure PPG leaders are aware of final submission dates for PPG proposals and	Executive Director	ASAP	

	full requirements.			
7	ACTION: Develop a 5 to 10 year schedule of “status” articles. Target questions that will be asked or should be asked. Multi- purpose for ATCM, public and scientists – may need multiple versions targeting differing audiences – press releases to establish SCAR as an authoritative source of Antarctic science knowledge	J Turner, ACCE Expert Group	End of 2011	
8	The ACCE Expert Group and SCADM to work together in order to provide access to key climate data e.g. the predictions from IPCC AR5	J Turner, SCADM	Early 2012	
9	SCAR to arrange a meeting in Portland during the Business Meetings (most likely as part of the OpMet group) to discuss observing systems (the way forward, synergies etc.) within SCAR (e.g. OPMet, SOOS) and with other organisations (e.g. WMO, WCRP)	Steve Colwell, Executive Director	Early 2012	
10	<i>SCAR Products</i> : SCAR Secretariat (with SCADM/SCAGI COs) to carry out an initial review of SCAR Products (see which have been updated, make initial email contact with those in charge of Products etc.) and present results to SCADM/SCAGI. SCAGI and SCADM to then discuss the outcomes with a view to a more comprehensive review if necessary.	Executive Director, SCADM, SCAGI COs	By end 2011	
11	<i>Data Atlas</i> (i) SCAR to advertise the Antarctic Data Atlas (e.g. article for next SCAR Newsletter), but making clear this is a test version that is open for comment. (ii) J Turner to produce a short description	Executive Director, J Turner	ASAP	

	of what is required in terms of input, (iii) Need an http alias for the atlas. (Executive Director, J Turner; ASAP)			
12	SCAR (with COMNAP) to investigate forming a group to coordinate research and possibly logistics in other regions of the Antarctic e.g. Ross Sea region	G di Prisco, President	Early 2012	

### **Appendix 3 – Terms of Reference of ACCE Expert Group**

- Coordinate research across SCAR on past and potential future climate change over the Antarctic continent and in the Southern Ocean and potential impact on the biota.
- Lead the preparation of the annual report to the ATCM on recent advances in climate-related research relevant to the Antarctic.
- Prepare updates and supplements to the Antarctic Climate Change and the Environment (2009) report as necessary and consider when an ACCE-2 should be prepared.
- Advise the SCAR Delegates on areas where research is needed.
- Work with SCADM to provide advice to SCAR groups who require access to climate data.
- Advise on the involvement of SCAR with bodies such as the Intergovernmental Panel on Climate Change on matters relevant to Antarctica and the Southern Ocean.
- Liaise with CCAMLR on matters relevant to climate and the biosphere.